

FOUR NEW SPECIES OF TYDEIDAE FROM MEXICO (Acarina)

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In the continuation of the study of the mites belonging to the family Tydeidae, four new species from Mexico are being presented. One belongs to the minute genus *Microtydeus*, and the other three to the genus *Tridilatydeus*, which has three eye spots and unsplit or entire pulvilli. The types will be deposited in the United States National Museum.

***Microtydeus beltrani*, new species**

(Fig. 1)

Female.—Small, white mite; some with dark markings on the anterior portion of abdomen; narrow (all specimens on side in preparations); body furrow entire and simple; body rounded; abdominal outline wavy; skin finely striated and tuberculated. Rostrum of normal size or slightly larger; a pair of long anterior-median hairs on venter of rostrum, and a pair of the same length out under segment I of palpus. Palpus of normal length; distal end of segment II reaching to tip of rostrum; segment II about $11\ \mu$ long and $6\ \mu$ wide, with 2 dorsal hairs (same length as hairs on venter of rostrum); segment III about $4.4\ \mu$ long and $3\ \mu$ wide, with the 2 usual hairs; segment IV $7.2\ \mu$ long and $3\ \mu$ wide, enlarging toward tip, with perhaps 4 short to medium-length end hairs. Second mandibular segment longish, straight, and thickened basally. Thorax about $50\ \mu$ long; eye spots not seen; sensory setae pilose on distal half only, $23\text{--}28\ \mu$ long, seated in large pores and depressions; inner thoracic setae $11\ \mu$ long; anterior $8\ \mu$ long; shoulder setae about same length as those on abdomen. Abdominal hairs $11\ \mu$ long; posterior hairs perhaps slightly longer; apparently 5 pairs of posterior hairs, all hairs, except sensory, simple. Abdomen $100\ \mu$ long, $58\ \mu$ thick at anterior end. Anal opening on rear. Apparently 4 pairs of short genital hairs. Legs normal: I, $72\ \mu$ long; II, $58\ \mu$; III and IV, $55\ \mu$ long. Tarsal pulvilli with hairs. Tarsus of leg I blunt, with a short, broad, clavate seta between posterior dorsal hairs; tarsus II with a similar seta which is shorter and broader. Length with rostrum $166\ \mu$, width not determined, thickness $58\ \mu$.

Type.—U. S. National Museum No. 1455.

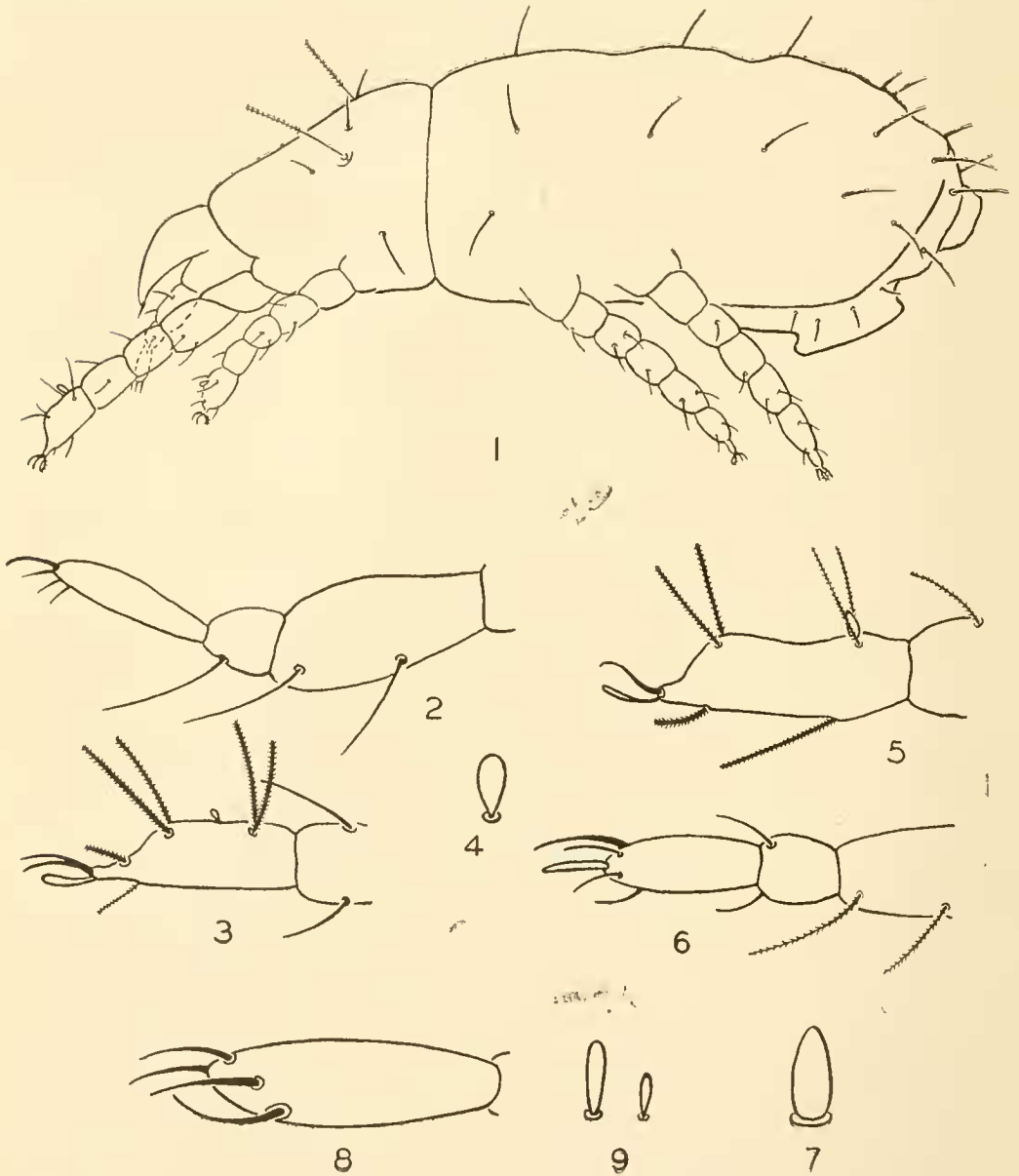
The type was taken from moss at the Desierto de los Leones, Mexico, February 7, 1943; the mites on the slide are from moss from the Laguna de Zempoala, Morelos, January 31, 1943. This species is named in honor of Professor Enrique Beltran.

The sensory setae, which are pilose in the distal half, are distinctive to this species.

Tridilatatydeus globiferus, new species

(Figs. 2, 3, 4)

Female.—Small, rounded; body furrow not plain; color unknown. Skin finely striated-tuberculated. Rostrum normal; venter with a pair of hairs out under segment I of palpus, and a pair of posterior hairs of short to medium length. Second mandibular segment apparently long. Palpus of normal size; segment II $20\ \mu$ long and $10\ \mu$ wide, with 2 lateral hairs about $11\ \mu$ long; segment



Microtydeus beltrani, n. sp. Fig. 1, Lateral view of adult.

Tridilatatydeus globiferus, n. sp. Fig. 2, Palpus. Fig. 3, Tarsus I. Fig. 4, Tarsus I sensory seta.

Tridilatatydeus fragarius, n. sp. Fig. 5, Tarsus I. Fig. 6, Palpus. Fig. 7, Tarsus I sensory seta.

Tridilatatydeus robustus, n. sp. Fig. 8, Palpus segment IV. Fig. 9, Tarsi I and II sensory setae.

III 7.5 μ long and 7.5 μ wide, with a single hair about 11 μ long; segment IV 17.5 μ long and 4 or slightly more μ wide, with 4-5 end hairs, the center hair strong, curved. Cephalothorax with 3 eyes; sensory setae (under oil) wirelike and apparently simple, 22.2 μ long; anterior to sensory setae a pair of short hairs, 8.5 μ long. Dorsal abdominal hairs 11.1 μ long; posterior abdominal hairs 16.6 μ long; under oil apparently simple. Genital opening with 5-7 short, pilose hairs. Legs normal; leg I about 100 μ long; II and III, 88 μ ; IV, 111 μ . Tarsus I with a small, globular sensory seta (in *Tridilatydeus stonei* it is rodlike, and in *T. hirsutus* long, curved); pulvilli without hairs; all tarsi with heavy, finely pilose hairs; other leg hairs simple. Length with rostrum 222 μ , width about 78 μ .

Type.—U. S. National Museum No. 1456.

The type was collected from lichens on the Mexico-Cuautla Highway near the road to Mt. Popocatepetl, March 8, 1943.

This species differs from *Tridilatydeus stonei* in the shape of the tarsal sensory setae, and in the arrangement of the pilose hairs (in *T. stonei* only the ventral hairs on tarsus I are pilose); from *T. hirsutus*, by the shape of the tarsal sensory setae, and in the presence of the simple body hairs.

***Tridilatydeus fragarius*, new species**

(Figs. 5, 6, 7)

Female.—Small, with parallel sides; body furrow simple, strong; amber color, lighter-colored rear and legs, with dark spots on dorsum. Finely striated, no tubercles seen. Rostrum normal; venter with a pair of pilose hairs of medium length out under segment I of palpus, and an antero-lateral pair of pilose hairs of medium length. Second mandibular segment long, curved. Palpus normal, segment II to tip of rostrum; segment II 25 μ long and 17.5 μ wide, with 2 pilose hairs of medium length; segment III 6 μ long and 5 μ wide, with 2 short-medium hairs which appear simple; segment IV 11 μ long and 4 μ wide, with a strong straight or only slightly curved center seta, and 4 other simple setae. First 3 segments striated transversally, 4th longitudinally. Cephalothorax with 3 eyes; sensory setae 15 μ long, pilose (all body hairs pilose); anterior thoracic setae 15 μ long; thoracic shoulder hair slightly shorter. Abdominal dorsal hairs 15 μ long; posterior abdominal hairs 20 μ long. Posterior abdominal suture present. Six pairs of pilose genital hairs. Legs normal; approximate lengths: I, 128 μ ; II, 89 μ ; III, 111 μ ; IV, 122 μ . Tarsus I with a wide, short, sensory seta (somewhat like an elongated strawberry); pulvilli without hairs; anterior and ventral tarsal hairs strong, pilose; other leg hairs normal, pilose. Length with rostrum 229 μ , width about 83 μ .

Type.—U. S. National Museum No. 1457.

The type was collected from lichens from Michoacan, along the Mexico-Guadalajara Highway near km. 285, April 8, 1943. Paratype mite (female) from moss, Contreras, D. F., December 1, 1943.

The pilose ventral rostral hairs and the peculiar tarsal sensory seta are distinctive.

Tridilatydeus robustus, new species

(Figs. 8, 9)

Female.—Medium-size, broadish mite; amber colored with dark abdominal and thoracic markings, and lighter colored legs and beak; body furrow simple, entire. Striations typical. Rostrum normal; venter with a pair of hairs out under segment I of palpus, and a short, fine posterior pair. Second mandibular segment medium to long, curved. Palpus normal; segment II with a small, sharp lateral tubercle, and 2 long simple hairs; 17.5 μ long and 10 μ wide; segment III 6 μ long and 6.5 μ wide, with one long and one short hair; segment IV 18.7 μ long and 4.5 μ wide, with 4 end hairs, all appearing simple; striations typical. Cephalothorax with 3 eyes; sensory setae pilose, 22 μ long, anterior to the lateral eyes; lateral setae (near eyes) 12.5 μ long, pilose; anterior pilose setae (laterad to anterior median eye) 11 μ long. All body hairs pilose; abdominal shoulder hair 20 μ long; dorsal abdominal hair 10 μ long; posterior abdominal hair 25 μ long. Five to seven pairs of pilose genital hairs. Legs normal; approximate lengths: I, 122 μ ; II, 89 μ ; III, 100 μ ; IV, 111 μ . All leg hairs pilose; tarsus I hairs heavy, pilose; sensory seta on tarsus I small, clublike, smaller on tarsus II; tarsal pads without hairs. Length with rostrum 233 μ , width 111 μ .

Type.—U. S. National Museum No. 1458.

The type specimen was collected from moss at the Desierto de los Leones, Mexico, December 5, 1943. On the same slide are specimens of *Tridilatydeus fragarius*.

The combination of the strong tarsal center seta, the tubercle on the 2nd segment of the palpus, and the pilose hairs is distinctive.
